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with Saprolegnia remained healthy. Dace, sea trout and one gold fish inoculated with Saprolegnia and B. salmonis pestis died in various periods of time (2 to 18 days) except the gold fish which died after inoculation and showed signs of the fungus on the gill covers. No attempt was made to make cultures from the dead gold fish."

## Patterson concludes that:--

"Saprolegnia grows on live" h in the presence of the organism, which breaks down the superficial tissus a suitable nidus for the fungus to grow on."

I had no Saprolegnia to try similar experiments.

The difficulty of obtaining and keeping fish for experiments in a laboratory unequipped for such work, and the difficulty because of lack of laboratory equipment to carry out experimental work at the hatchery, will have to be overcome before any decisive experiments can be undertaken.

It is, however, significant that all organs apparently healthy in the salmon examined contained bacteria in large numbers, and of comparatively few species, and I am unable to state or find in any literature or obtain information as to the bacterial content of the normal organs of fish, or how soon after death, and to what extent, these organs are invaded by bacteria. Very large numbers of bacteria were found in the eggs from a number of the fungus-infected salmon, and under normal conditions one would scarcely expect to find so many bacteria present.

All that can be stated at present is that Patterson's organism, B. salmonis pestis, was not found, and that the large number of bacteria present accompanying the Saprolegnia may have some pathogenic role, but the rules of proof (Koch's postulates) would have to be worked out where fish, the means of keeping them, and laboratory

facilities are provided.